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R. B. SELIGMAN

TOBACCO INSTITUTE TESTING LABORATORY

TAR AND NICOTINE

SUMMARIES

MARKET SAMPLE NO. 19

TAR AND NICOTINE VALUES
BY COMPANY

Philip Morris	Tar mg/cigt.	Nicotine mg/cigt.
Alpine KFM	14.6 ± 0.2	0.89±0.02
Benson & Hedges RF Benson & Hedges KF	9.5±0.3 15.6±0.3	0.61±0.02 1.09±0.02
Benson & Hedges 100's FHP	17.3 ± 0.3	1.09 ± 0.02
Benson & Hedges 100's FSP	17.4±0.4	1.08 ± 0.02
Benson & Hedges 100's FMHP	16.8±0.3	1.06 ± 0.01
Benson & Hedges 100's FMSP	17.5±0.3	1.10 ± 0.02
English Ovals RNF	23.6±0.5	1.81 ± 0.05
English Ovals KNF	30.6±0.5	2.33 ± 0.04
Galaxy KF	15.2 ± 0.2	0.98±0.02
Marlboro KFHP	17.1±0.3	1.06 ± 0.02
Marlboro KFSP Marlboro KFMHP	18.2±0.4 14.1±0.2	1.12±0.02 0.80±0.02
Marlboro KFMSP	14.1±0.2 14.6±0.2	0.88±0.02
Marlboro 100 FHP	17.8±0.3	1.12 ± 0.02
Marlboro 100 FSP	17.5±0.3	1.12 ± 0.02
Marlboro Lights KF	13.5 ± 0.3	0.86±0.02
Merit KF	8.3 ± 0.2	0.58±0.01
Merit KFM	8.3±0.2	0.58 ± 0.01
Miyako KF	14.5±0.3	0.98 ± 0.03
Multifilter KF	12.9±0.4	0.86±0.02
Multifilter KFM	10.7±0.2	0.71 ± 0.02
Parliament KFHP	14.0±0.2	0.82±0.02
Parliament KFSP	14.7±0.2	0.86±0.02
Parliament 100 F Philip Morris RNF	15.9±0.4 20.8±0.4	0.98±0.03 1.16±0.04
Philip Morris Commander KNF	25.3±0.4	1.46±0.04
Philip Morris Int. 100 F	17.9±0.3	1.13±0.02
Philip Morris Int. 100 FM	16.6 ± 0.2	1.01±0.02
Players RNF	35.0±0.5	2.48 ± 0.07
Saratoga 120 F	16.2±0.3	1.06 ± 0.02
Saratoga 120 FM	16.9 ± 0.3	1.09 ± 0.02
Virginia Slims 100 F	15.9 ± 0.2	0.98±0.02
Virginia Slims 100 FM	15.7±0.2	0.96±0.02
Virginia Slims 120 F	17.1 ± 0.5	1.11 ± 0.03
Virginia Slims 120 FM	14.8±0.7	1.03±0.01

American Brands	Tar mg/cigt.	Nicotine mg/cigt.
American Longs 120 F American Longs 120 FM Bull Durham KF	19.5±0.5 16.9±0.7 29.8±0.4	1.52±0.04 1.33±0.04 1.97±0.03
Carlton 70's RF	0.2 ± 0.1	0.04±0.01
Carlton KF (mixed)	2.5±0.3	0.23 ± 0.03
Carlton KFM (mixed)	2.7 ± 0.3	0.24 ± 0.03
Carlton KF (2 mg).	1.3 ± 0.1	0.13±0.02
Carlton KFM (2 mg)	0.8 ± 0.1	0.10 ± 0.01
Carlton KF (5 mg)	3.7±0.3	0.33 ± 0.02
Carlton KFM (5 mg)	3.7±0.3	0.34±0.02
Half & Half KF	24.9±0.3 28.4±0.5	1.87±0.03 1.85±0.04
Herbert Tareyton KNF Iceberg 100's FM	8.8±0.2	0.68 ± 0.04
Long Johns 120 F	18.6 ± 0.4	1.46±0.02
Long Johns 120 FM	15.8±0.3	1.29±0.03
Lucky Strike RNF	25.4±0.4	1.56±0.03
Lucky Strike Filter KF	25.2 ± 0.4	1.65 ± 0.02
Lucky Ten KF	9.3±0.2	0.68±0.02
Lucky 100's F	9.0 ± 0.3	0.68 ± 0.01
Montclair KFM	18.1 ± 0.5	1.32±0.04
Pall Mall KNF	27.1±0.5	1.73 ± 0.03
Pall Mall KFHP	23.6±0.4	1.61±0.02
Pall Mall KFSP	18.3±0.3	1.27±0.02
Pall Mall 100 F	18.9±0.3	1.44 ± 0.02
Pall Mall 100 FM	15.5±0.3	1.21±0.02
Pall Mall Extra Mild KFHP	7.6 ± 0.2	0.65 ± 0.01
Pall Mall Extra Mild KFSP	9.8±0.3	0.74 ± 0.02
Silva Thins 100 F	16.1±0.2 15.3±0.4	1.26±0.02 1.15±0.03
Silva Thins 100 FM Super M 100 FM	15.3±0.4 16.7±0.3	1.13 ± 0.03 1.21 ± 0.02
Tall 120 F	20.9 ± 0.4	1.64±0.03
Tall 120 FM	18.2±0.5	1.52±0.05
Tareyton KF	20.1±0.3	1.42±0.02
Tareyton 100 F	19.3±0.4	1.41±0.03
Twist 100 FM	17.0±0.3	1.34+0.02

Brown & Williamson	Tar mg/cigt.	Nicotine mg/cigt.
Belair KFM	14.6±0.2	1.04±0.03
Belair 100 FM	17.6±0.4	1.35±0.03
Du Maurier KF	15.6±0.3	1.09±0.03
Fact KF	14.3±0.3	1.04±0.02
Fact KFM	12.7±0.2	0.95±0.02
Kool RNFM	21.4±0.8	1.34 ± 0.04
Kool KFMHP	17.1±0.3	1.40±0.03
Kool KFMSP	16.8±0.3	1.38 ± 0.02
Kool 100 FM	18.0±0.4	1.37±0.03
Kool Milds KFM	13.6±0.2	0.93 ± 0.02
Phoenix 120 F	19.5 ± 0.5	1.34 ± 0.05
Phoenix 120 FM	19.4±0.5	1.32 ± 0.04
Raleigh KNF	25.5±0.6	1.57 ± 0.04
Raleigh KF	15.9±0.3	1.11 ± 0.03
Raleigh 100 F	18.0±0.4	1.30±0.04
Raleigh Extra Mild KF	13.7 ± 0.3	1.02 ± 0.03
Vanguard KF	15.7±0.4	1.09 ± 0.03
Viceroy KF	15.6±0.2	1.09 ± 0.02
Viceroy 100 F	17.7±0.4	1.29 ± 0.03
Vicerov Extra Mild KF	13.5±0.3	1.03 ± 0.02

Liggett & Myers	Tar mg/cigt.	Nicotine mg/cigt.
Chesterfield RNF Chesterfield KNF Chesterfield KF Chesterfield 101 F Eagle 20's KF Eagle 20's KF Eagle 20's KFM Eve 100 F Eve 100 FM Eve 120's F Eve 120's F Eve 120's FM Fatima KNF Home Run RNF L & M KFHP L & M KFSP L & M 100 F L & M 100 F Lark KF Lark 100 F Oasis KFM Picayune RNF Piedmont RNF	mg/cigt. 24.7±0.6 28.8±0.5 18.4±0.3 17.8±0.5 18.3±0.3 18.6±0.4 16.5±0.3 17.3±0.4 14.5±0.4 14.9±0.3 28.2±0.5 20.9±0.5 16.5±0.3 17.7±0.4 18.1±0.4 17.5±0.3 19.4±0.3 18.5±0.4 20.7±0.4 25.7±0.4	mg/cigt. 1.45±0.04 1.73±0.03 1.18±0.02 1.15±0.03 1.15±0.02 1.19±0.03 1.09±0.02 1.13±0.03 1.07±0.02 1.67±0.03 1.63±0.03 1.63±0.03 1.16±0.03 1.16±0.03 1.16±0.03 1.16±0.03 1.16±0.03 1.28±0.02 1.59±0.03 1.46±0.04
St. Moritz 100 F St. Moritz 100 FM Vello KF Vello KFM	17.3 ± 0.4 17.5 ± 0.2 10.5 ± 0.3 9.9 ± 0.2	1.14±0.03 1.13±0.02 0.74±0.02 0.71±0.01

Lorillard	Tar mg/cigt.	Nicotine mg/cigt.
Kent KFHP	15.0 ± 0.3	0.94 ± 0.02
Kent KFSP	15.9±0.2	1.02±0.02
Kent 100 F	18.0±0.3	1.16±0.02
Kent 100 FM	16.5±0.3	1.09±0.02
Kent Golden Lights KF	8.3±0.3	0.67±0.03
L. T. Brown 120 F	19.1±0.5	1.49±0.02
L. T. Brown 120 FM	19.5±0.3	1.47±0.03
Max 120 F	16.3±0.5	1.26±0.04
Max 120 FM	16.4 ± 0.3	1.23 ± 0.02
Newport KFMHP	17.6±0.3	1.24±0.03
Newport KFMSP	18.1±0.5	1.29±0.03
Newport 100 FM	19.5±0.4	1.44±0.03
Old Gold Straights RNF	19.7±0.4	1.19±0.03
Old Gold Straights KNF	24.4±0.3	1.48 ± 0.03
Old Gold Filters KFHP	16.6 ± 0.2	1.25±0.02
Old Gold Filters KFSP	17.1±0.4	1.12±0.03
01d Go1d 100's F	20.5±0.4	1.37 ± 0.03
Spring 100's FM	18.1 ± 0.4	1.04±0.03
True KF	11.1 ± 0.3	0.68 ± 0.02
True KFM	11.1±0.2	0.68 ± 0.02
True 100's F	13.7±0.3	0.84±0.04
True 100's FM	13.2 ± 0.3	0.81 ± 0.02
Zack KFHP	17.8±0.3	1.23 ± 0.02
Zack KFSP	17.6 ± 0.2	1.26±0.02
Zack KFM	16.8±0.2	1.21±0.02

R. J. Reynolds	Tar mg/cigt.	Nicotine mg/cigt.
Camel RNF Camel KFHP Camel KFSP Dawn 120 F Dawn 120 FM Doral KF Doral KFM More 120 F More 120 F More 120 FM Now KF Now KFM Salem KFMHP Salem KFMSP Salem Lights KFM Tempo KF Vantage KF Vantage KF Winston KFSP	23.9±0.5 18.6±0.3 18.5±0.3 20.7±0.4 21.7±0.3 11.9±0.4 21.8±0.5 22.5±0.4 1.6±0.1 1.7±0.2 18.9±0.3 11.6±0.3 11.6±0.3 11.6±0.3 11.6±0.3 11.6±0.3	1.56 ± 0.03 1.25 ± 0.03 1.28 ± 0.02 1.54 ± 0.03 1.64 ± 0.03 0.90 ± 0.02 0.87 ± 0.02 1.61 ± 0.04 1.73 ± 0.04 0.15 ± 0.01 0.15 ± 0.01 1.26 ± 0.04 1.20 ± 0.02 1.28 ± 0.02 0.82 ± 0.04 0.60 ± 0.03 0.74 ± 0.01 0.78 ± 0.01 1.29 ± 0.03 1.30 ± 0.02
Winston 100 F Winston 100 FM Winston Lights KF	18.8±0.3 18.2±0.2 13.0±0.3	1.31 ± 0.03 1.26 ± 0.02 0.94 ± 0.02

U. S. Tobacco	Tar mg/cigt.	Nicotine mg/cigt.
Domino KNF	34.0±0.7	1.56±0.04
Domino KF	21.8±0.5	1.19 ± 0.04
King Sano KF	7.0±0.3	0.39±0.01
King Sano KFM	7.4±0.4	0.37±0.02
Mapleton RNF	28.0±0.4	1.34 ± 0.03
Mapleton KF	21.5±0.5	1.14±0.03
Sano RNF	18.4±0.4	0.69±0.02
Stratford KNF	29.2±0.4	1.13 ± 0.03
Stratford KF	25.2±0.4	1.36 ± 0.03

TAR AND NICOTINE VALUES ALPHABETICAL LISTING

BRAND	Tar mg/cigt.	Nicotine mg/cigt.
Alpine KFM American Longs 120 F American Longs 120 FM Belair KFM Belair 100 FM Benson & Hedges RF Benson & Hedges KF Benson & Hedges 100's FHP Benson & Hedges 100's FSP Benson & Hedges 100's FMBP Benson & Hedges 100's FMSP Bull Durham KF Camel RNF Camel KFSP Carlton 70's RF Carlton KF (mixed) Carlton KF (mixed) Carlton KFM (2 mg) Carlton KFM (2 mg) Carlton KFM (5 mg) Carlton KFM (5 mg) Chesterfield RNF Chesterfield KNF Chesterfield KNF Chesterfield KF Chesterfield KNF Chesterfield NF Chest	mg/cigt. 14.6±0.2 19.5±0.5 16.9±0.7 14.6±0.4 9.5±0.3 15.6±0.3 17.3±0.3 17.4±0.4 16.8±0.3 17.5±0.3 29.8±0.5 18.6±0.3 1.3±0.1 2.5±0.3 2.7±0.3 1.3±0.1 3.7±0.3 24.7±0.4 21.7±0.4 21.7±0.4 21.7±0.4 21.7±0.3 11.9±0.4 15.6±0.3 17.5±0.3 11.9±0.4 15.6±0.3 17.5±0.3 11.9±0.4 15.6±0.3 17.5±0.3 11.9±0.4 15.6±0.3 17.5±0.3 11.9±0.4 15.6±0.3 17.5±0.3 11.9±0.4 15.6±0.3 17.5±0.3 11.9±0.4 15.6±0.3 17.5±0.3 11.9±0.4 15.6±0.3 17.5±0.3 11.9±0.4 15.6±0.3 17.5±0.3 17.5±0.3 11.9±0.4 15.6±0.3 17.5±0.3 11.9±0.4 15.6±0.3 17.5±0.3	mg/cigt. 0.89±0.02 1.52±0.04 1.33±0.04 1.04±0.03 1.35±0.03 0.61±0.02 1.09±0.02 1.09±0.02 1.06±0.01 1.10±0.02 1.97±0.03 1.25±0.03 1.25±0.03 1.28±0.02 0.04±0.01 0.23±0.03 0.13±0.02 0.10±0.01 0.33±0.02 0.34±0.02 1.45±0.03 1.18±0.02 1.45±0.03 1.56±0.04 1.73±0.03 1.56±0.04 1.19±0.04 0.90±0.02 0.87±0.02 1.09±0.03 1.15±0.03 1.56±0.04 1.19±0.04 0.90±0.02 1.09±0.02 1.09±0.02 1.09±0.03 1.15±0.03
Iceberg 100's FM Kent KFHP Kent KFSP Kent 100 F Kent 100 FM	8.8 ± 0.2 15.0 ± 0.3 15.9 ± 0.2 18.0 ± 0.3 16.5 ± 0.3	$0.68\pm0.03 \\ 0.94\pm0.02 \\ 1.02\pm0.02 \\ 1.16\pm0.02 \\ 1.09\pm0.02$
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	Tar	Nicotine
BRAND	mg/cigt.	mg/cigt.
Kent Golden Lights KF	8.3±0.3	0.67±0.03
King Sano KF	7.0±0.3	0.39 ± 0.01
King Sano KFM	7.4 ± 0.4	0.37 ± 0.02
Kool RNFM	21.4±0.8	1.34±0.04
Kool KFMHP	17.1±0.3	1.40 ± 0.03
Kool KFMSP	16.8 ± 0.3	1.38 ± 0.02
Kool 100 FM	18.0±0.4	1.37±0.03
Kool Milds KFM	13.6 ± 0.2	0.93±0.02
L & M KFHP	16.5±0.3	1.03±0.02
L & M KFSP	18.5±0.3	1.17 ± 0.02
L & M 100 F	17.7±0.4	1.16 ± 0.03
L & M 100 FM	18.1±0.4	1.16 ± 0.03
L. T. Brown 120 F	19.1±0.5	1.49 ± 0.02
L. T. Brown 120 FM	19.5±0.3	1.47±0.03
Lark KF	17.5±0.3	1.16 ± 0.03
Lark 100 F	19.4±0.3	1.28 ± 0.02
Long Johns 120 F Long Johns 120 FM	18.6±0.4	1.46 ± 0.02
Lucky Strike RNF	15.8±0.3 25.4±0.4	1.29±0.03 1.56±0.03
Lucky Strike Filter KF	25.2±0.4	1.65±0.03
Lucky Ten KF	9.3±0.2	0.68±0.02
Lucky 100's F	9.0±0.3	0.68±0.01
Mapleton RNF	28.0 ± 0.4	1.34±0.03
Mapleton KF	21.5±0.5	1.14 ± 0.03
Marlboro KFHP	17.1±0.3	1.06 ± 0.02
Marlboro KFSP	18.2±0.4	1.12 ± 0.02
Marlboro KFMHP	14.1 ± 0.2	0.80 ± 0.02
Marlboro KFMSP	14.6±0.2	0.88 ± 0.02
Marlboro 100 FHP	17.8 ± 0.3	1.12 ± 0.02
Marlboro 100 FSP	17.5 ± 0.3	1.12±0.02
Marlboro Lights KF	13.5 ± 0.3	0.86 ± 0.02
Max 120 F Max 120 FM	16.3±0.5	1.26±0.04
Merit KF	16.4±0.3 8.3±0.2	1.23±0.02 0.58±0.01
Merit KFM	8.3±0.2 8.3±0.2	0.58 ± 0.01
Miyako KF	14.5±0.3	0.98±0.03
Montclair KFM	18.1±0.5	1.32±0.04
More 120 F	21.8±0.5	1.61±0.04
More 120 FM	22.5 ± 0.4	1.73 ± 0.04
Multifilter KF	12.9±0.4	0.86 ± 0.02
Multifilter KFM	10.7±0.2	0.71 ± 0.02
Newport KFMHP	17.6 ± 0.3	1.24 ± 0.03
Newport KFMSP	18.1±0.5	1.29±0.03
Newport 100 FM	19.5±0.4	1.44±0.03
Now KF	1.6 ± 0.1	0.15 ± 0.01
Now KFM	1.7±0.2	0.15 ± 0.01
Oasis KFM Old Gold Straights RNF	18.5±0.4	1.15±0.02 1.19±0.03
Old Gold Straights KNF	19.7±0.4 24.4±0.3	1.48±0.03
Old Gold Filters KFHP	16.6±0.2	1.25±0.02
Old Gold Filters KFSP	17.1±0.4	1.12±0.03
01d Gold 100's F	20.5±0.4	1.37±0.03
Pall Mall KNF	27.1±0.5	1.73±0.03

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BRAND	Tar _mg/cig t.	Nicotine _mg/cigt.
200.2017	ms/ orge.	mg/cigc.
Pall Mall KFHP	23.6±0.4	1.61±0.02
Pall Mall KFSP	18.3±0.3	1.27±0.02
Pall Mall 100 F	18.9 ± 0.3	1.44±0.02
Pall Mall 100 FM	15.5±0.3	1.21±0.02
Pall Mall Extra Mild KFHP	7.6 ± 0.2	0.65±0.01
Pall Mall Extra Mild KFSP	9.8±0.3	0.74 ± 0.02
Parliament KFHP	14.0±0.2	0.82 ± 0.02
Parliament KFSP	14.7±0.2	0.86 ± 0.02
Parliament 100 F	15.9±0.4	0.98 ± 0.03
Philip Morris RNF	20.8±0.4	1.16±0.04
Philip Morris Commander KNF	25.3±0.4	1.46±0.03
Philip Morris Int. 100 F	17.9±0.3	1.13 ± 0.02
Philip Morris Int. 100 FM	16.6±0.2	1.01 ± 0.02
Phoenix 120 F	19.5±0.5	1.34±0.05
Phoenix 120 FM	19.4±0.5	1.32±0.04
Picayune RNF	20.7±0.4	1.59±0.03
Piedmont RNF	25.7±0.4	1.46±0.04
Players RNF	35.0±0.5	2.48±0.07
Raleigh KNF	25.5±0.6	1.57±0.04
Raleigh KF	15.9 ± 0.3	1.11±0.03
Raleigh 100 F	18.0±0.4	1.30±0.04
Raleigh Extra Mild KF	13.7±0.3	1.02 ± 0.03
St. Moritz 100 F	17.3±0.4	1.14±0.03
St. Moritz 100 FM	17.5±0.2	1.13±0.02
Salem KFMHP	18.9±0.3	1.26±0.04
Salem KFMSP	18.2 ± 0.4	1.20±0.02
Salem 100 FM	18.2±0.3	1.28±0.02
Salem Lights KFM	11.6±0.3	0.82±0.04
Sano RNF	18.4±0.4	0.69±0.02
Saratoga 120 F	16.2±0.3	1.06±0.02
Saratoga 120 FM	16.9±0.3	1.09 ± 0.02
Silva Thins 100 F	16.1 ± 0.2	1.26±0.02
Silva Thins 100 FM	15.3 ± 0.4	1.15 ± 0.03
Spring 100's FM Stratford KNF	18.1±0.4	1.04 ± 0.03
Stratford KF	29.2±0.4	1.13±0.03
Super M 100 FM	25.2±0.4	1.36 ± 0.03
Tall 120 F	16.7±0.3 20.9±0.4	1.21±0.02 1.64±0.03
Tall 120 FM	18.2±0.5	1.52±0.05
Tareyton KF	20.1±0.3	1.42±0.03
Tareyton 100 F	19.3±0.4	1.41±0.03
Tempo KF	8.1±0.4	0.60±0.03
True KF	11.1±0.3	0.68±0.02
True KFM	11.1±0.2	0.68 ± 0.02
True 100's F	13.7±0.3	0.84±0.04
True 100's FM	13.2±0.3	0.81 ± 0.02
Twist 100 FM	17.0±0.3	1.34 ± 0.02
Vanguard KF	15.7±0.4	1.09±0.03
Vantage KF	10.8±0.3	0.74±0.01
Vantage KFM	10.7±0.2	0.78 ± 0.01
Vello KF	10.5±0.3	0.74 ± 0.02
Vello KFM	9.9±0.2	0.71 ± 0.01

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BRAND	Tar mg/cigt.	Nicotine mg/cigt.
Viceroy KF Viceroy 100 F Viceroy Extra Mild KF Virginia Slims 100 F Virginia Slims 100 FM Virginia Slims 120 F Virginia Slims 120 FM Winston KFHP Winston KFSP Winston 100 F Winston Lights KF Zack KFHP	15.6 ± 0.2 17.7 ± 0.4 13.5 ± 0.3 15.9 ± 0.2 15.7 ± 0.2 17.1 ± 0.5 14.8 ± 0.7 19.5 ± 0.4 19.0 ± 0.3 18.8 ± 0.3 18.2 ± 0.2 13.0 ± 0.3 17.8 ± 0.3	$\begin{array}{c} 1.09 \pm 0.02 \\ 1.29 \pm 0.03 \\ 1.03 \pm 0.02 \\ 0.98 \pm 0.02 \\ 0.96 \pm 0.02 \\ 1.11 \pm 0.03 \\ 1.03 \pm 0.01 \\ 1.29 \pm 0.03 \\ 1.30 \pm 0.02 \\ 1.31 \pm 0.03 \\ 1.26 \pm 0.02 \\ 0.94 \pm 0.02 \\ 1.23 \pm 0.02 \\ \end{array}$
Zack KFSP Zack KFM	17.6±0.2 16.8±0.2	1.26 ± 0.02 1.21 ± 0.02

TAR AND NICOTINE VALUES
BY TAR RANK

	. 19	
	$\lambda^{(-)}$ Tar	Nicotine
BRAND	mg/cigt.	mg/cigt.
Carlton 70's RF	0,2±0.1	0.04±0.01
Carlton KFM (2 mg)	0.2±0.1 0.8±0.1	0.10 ± 0.01
Carlton KF (2 mg)	1.3±0.1	0.13±0.02
Now KF	1.6±0.1	0.15 ± 0.01
Now KFM	$\textbf{1.7} \!\pm\! \textbf{0.2}$	0.15 ± 0.01
Carlton KF (mixed)	2.5 ± 0.3	0.23±0.03
Carlton KFM (mixed)	2.7±0.3	0.24±0.03
Carlton KF (5 mg) .	3.7±0.3 3.7±0.3	0.33 ± 0.02
Carlton KFM (5 mg) King Sano KF	7.0±0.3	0.34±0.02 0.39±0.01
King Sano KFM	7.4±0.4	0.37 ± 0.01
Pall Mall Extra Mild KFHP	7.6±0.2	0.65 ± 0.01
Tempo KF	8.1±0.4	0.60 ± 0.03
Kent Golden Lights KF	8.3±0.3	0.67 ± 0.03
Merit KF	8.3±0.2	0.58±0.01
Merit KFM	8.3±0.2	0.58±0.01
Iceberg 100's FM Lucky 100's F	8.8±0.2 9.0±0.3	0.68±0.03 0.68±0.01
Lucky Ten KF	9.3±0.2	0.68 ± 0.02
Benson & Hedges RF	9.5±0.3	0.61 ± 0.02
Pall Mall Extra Mild KFSP	9.8±0.3	0.74±0.02
Vello KFM	9.9±0.2	0.71 ± 0.01
Vello KF	10.5±0.3	0.74±0.02
Multifilter KFM	10.7±0.2 10.7±0.2	0.71±0.02 0.78±0.01
Vantage KFM Vantage KF	10.7±0.2 10.8±0.3	0.76 ± 0.01 0.74 ± 0.01
True KF	11.1 ± 0.3	0.68 ± 0.02
True KFM	11.1 ± 0.2	0.68 ± 0.02
Salem Lights KFM	11.6±0.3	0.82 ± 0.04
Doral KFM	11.9 ± 0.4	0.87±0.02
Fact KFM	12.7±0.2	0.95 ± 0.02
Doral KF Multifilter KF	12.7±0.3 12.9±0.4	0.90±0.02 0.86±0.02
Winston Lights KF	13.0±0.3	0.80 ± 0.02 0.94 ± 0.02
True 100's FM	13.2±0.3	0.81 ± 0.02
Marlboro Lights KF	13.5±0.3	0.86±0.02
Viceroy Extra Mild KF	13.5±0.3	1.03±0.02
Kool Milds KFM	13.6±0.2	0.93 ± 0.02
Raleigh Extra Mild KF	13.7±0.3	1.02±0.03
True 100's F Parliament KFHP	$13.7 \pm 0.3 \\ 14.0 \pm 0.2$	0.84±0.04 0.82±0.02
Marlboro KFMHP	14.1±0.2	0.80 ± 0.02
Fact KF	14.3±0.3	1.04±0.02
Eve 120's F	14.5±0.4	1.07±0.02
Miyako KF	14.5±0.3	0.98 ± 0.03
Alpine KFM	14.6±0.2	0.89±0.02
Marlboro KFMSP Belair KFM	14.6±0.2	0.88±0.02
Parliament KFSP	14.6±0.2 14.7±0.2	1.04±0.03 0.86±0.02
Virginia Slims 120 FM	14.8±0.7	1.03±0.01
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BRAND	Tar mg/cigt.	Nicotine mg/cigt.
DIAMID	mg/cige.	mg/cige.
Eve 120's FM	14.9±0.3	1.07±0.02
Kent KFHP	15.0±0.3	0.94±0.02
Galaxy KF	15.2 ± 0.2	0.98 ± 0.02
Silva Thins 100 FM	15.3±0.4	1.15±0.03
Pall Mall 100 FM	15.5 ± 0.3	1.21±0.02
Benson & Hedges KF	15.6±0.3	1.09±0.02
Du Maurier KF	15.6 ± 0.3	1.09±0.03
Viceroy KF	15.6±0.2	1.09±0.02
Virginia Slims 100 FM	15.7±0.2	0.96 ± 0.02
Vanguard KF	15.7±0.4	1.09 ± 0.03
Long Johns 120 FM	15.8±0.3 15.9±0.2	1,29±0.03 0.98±0.02
Virginia S1ims 100 F Kent KFSP	15.9±0.2	1.02±0.02
Raleigh KF	15.9±0.2	1.11 ± 0.03
Parliament 100 F	15.9±0.4	0.98±0.03
Silva Thins 100 F	16.1±0.2	1.26±0.02
Saratoga 120 F	16.2±0.3	1.06±0.02
Max 120 F	16.3±0.5	1.26±0.04
Max 120 FM	16.4±0.3	1.23±0.02
Kent 100 FM	16.5 ± 0.3	1.09±0.02
Eve 100 F	16.5±0.3	1.09 ± 0.02
L & M KFHP	16.5±0.3	1.03±0.02
Philip Morris Int. 100 FM	16.6 ± 0.2	1.01 ± 0.02
Old Gold Filters KFHP	16.6 ± 0.2	1.25 ± 0.02
Sunar M 100 FM	16.7±0.3	1.21±0.02
Kool KFMSP	16.8 ± 0.3	1.38 ± 0.02
Benson & Hedges 100's FMHP	16.8±0.3	1.06 ± 0.01
Zack KFM	16.8±0.2	1.21 ± 0.02
American Longs 120 FM	16.9±0.7	1.33±0.04
Saratoga 120 FM	16.9±0.3	1.09±0.02
Twist 100 FM	17.0 ± 0.3	1,34±0.02
Marlboro KFHP	17.1 ± 0.3	1.06 ± 0.02
Kool KFMHP	17.1 ± 0.3	1.40±0.03
Old Gold Filters KFSP	17.1 ± 0.4	1.12 ± 0.03
Virginia Slims 120 F	17.1±0.5	1.11 ± 0.03
Eve 100 FM	17.3±0.4	1.13 ± 0.03
St. Moritz 100 F	17.3 ± 0.4	1.14 ± 0.03
Benson & Hedges 100's FHP	17.3±0.3	1.09±0.02
Benson & Hedges 100's FSP	17.4±0.4	$1.08\pm0.02 \\ 1.13\pm0.02$
St. Moritz 100 FM Lark KF	17.5±0.2 17.5±0.3	1.16 ± 0.02
Benson & Hedges 100's FMSP	17.5±0.3	1.10 ± 0.03 1.10 ± 0.02
Marlboro 100 FSP	17.5±0.3	1.12±0.02
Belair 100 FM	17.6±0.4	1.35±0.03
Zack KFSP	17.6 ± 0.2	1.26±0.02
Newport KFMHP	17.6±0.3	1.24 ± 0.03
L & M 100 F	17.7±0.4	1.16 ± 0.03
Viceroy 100 F	17.7±0.4	1.29±0.03
Marlboro 100 FHP	17.8±0.3	1.12±0.02
Chesterfield 101 F	17.8±0.5	1.15±0.03

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BRAND	Tar _mg/cigt.	Nicotine mg/cigt.
		mg/cige.
Zack KFHP	17.8±0.3	1.23 ± 0.02
Philip Morris Int. 100 F	17.9±0.3	1.13 ± 0.02
Raleigh 100 F	18.0±0.4	1.30±0.04
Kool 100 FM	18.0±0.4	1.37±0.03
Kent 100 F	18.0±0.3	1.16 ± 0.02
Spring 100's FM	18.1 ± 0.4	1.04 ± 0.03
Newport KFMSP	18.1 ± 0.5	1.29 ± 0.03
Montcliar KFM	18.1±0.5	1.32±0.04
L & M 100 FM Salem KFMSP	18.1±0.4	1.16 ± 0.03
Tall 120 FM	18.2±0.4 18.2±0.5	1.20 ± 0.02
Salem 100 FM	18.2±0.3	1.52±0.05 1.28±0.02
Winston 100 FM	18.2±0.2	1.26 ± 0.02 1.26 ± 0.02
Marlboro KFSP	18.2±0.4	1.12 ± 0.02
Pall Mall KFSP	18.3±0.3	1.27±0.02
Eagle 20's KF	18.3±0.3	1.15 ± 0.02
Sano RNF	18.4±0.4	0.69 ± 0.02
Chesterfield KF	18.4±0.3	1.18±0.02
L & M KFSP	18.5 ± 0.3	1.17 ± 0.02
Camel KFSP	18.5±0.3	1.28 ± 0.02
Oasis KFM	18.5±0.4	1.15 ± 0.02
Camel KFHP	18.6±0.3	1.25±0.03
Long Johns 120 F	18.6 ± 0.4	1.46±0.02
Eagle 20's KFM	18.6±0.4	1.19 ± 0.03
Winston 100 F	18.8±0.3	1.31 ± 0.03
Salem KFMHP	18.9±0.3	1.26±0.04
Pall Mall 100 F Winston KFSP	18.9±0.3	1.44 ± 0.02
	19.0±0.3	1.30 ± 0.02
L. T. Brown 120 F Tareyton 100 F	19.1±0.5	1.49±0.02
Phoenix 120 FM	19.3±0.4 19.4±0.5	1.41±0.03
Lark 100 F	19.4±0.3	1.32 ± 0.04
L. T. Brown 120 FM	19.5±0.3	1.28±0.02 1.47±0.03
American Longs 120 F	19.5±0.5	1.52±0.04
Winston KFHP	19.5±0.4	1.29±0.03
Phoenix 120 F	19.5±0.5	1.34±0.05
Newport 100 FM	19.5±0.4	1.44 ± 0.03
Old Gold Straights RNF	19.7±0.4	1.19±0.03
Tareyton KF	20.1±0.3	1.42±0.02
01d Go1d 100's F	20.5±0.4	1.37 ± 0.03
Dawn 120 F	20.7±0.4	1.54±0.03
Picayune RNF	20.7±0.4	1.59±0.03
Philip Morris RNF	20.8±0.4	1.16 ± 0.04
Tall 120 F	20.9±0.4	1.64±0.03
Home Run RNF	20.9±0.5	1.63 ± 0.03
Kool RNFM	21.4±0.8	1.34±0.04
Mapleton KF Dawn 120 FM	21.5±0.5	1.14±0.03
Domino KF	21.7±0.4 21.8±0.5	1.64±0.03
More 120 F	21.8±0.5	1.19±0.04 1.61±0.04
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BRAND	Tar _mg/cigt.	Nicotine mg/cigt.
More 120 FM	22.5±0.4	1.73 ± 0.04
English Ovals RNF	23.6±0.5	1.81±0.05
Pall Mall KFHP	23.6±0.4	1.61±0.02
Camel RNF	23.9±0.5	1.56 ± 0.03
Old Gold Straights KNF	24.4±0.3	1.48±0.03
Chesterfield RNF	24.7±0.6	1,45±0.04
Half & Half KF	24.9±0.3	1.87±0.03
Lucky Strike Filter KF	25.2±0.4	1.65±0.02
Stratford KF	25.2±0.4	1.36 ± 0.03
Philip Morris Commander KNF	25.3±0.4	1.46±0.03
Lucky Strike RNF	25.4±0.4	1.56±0.03
Raleigh KNF	25.5±0.6	1.57±0.04
Piedmont RNF	25.7±0.4	1.46±0.04
Pall Mall KNF	27.1 ± 0.5	1.73 ± 0.03
Mapleton RNF	28.0±0.4	1.34 ± 0.03
Fatima KNF	28.2±0.5	1.67 ± 0.03
Herbert Tareyton KNF	28.4±0.5	1.85±0.04
Chesterfield KNF	28.8±0.5	1.73 ± 0.03
Stratford KNF	29.2±0.4	1.13±0.03
Bull Durham KF	29.8±0.4	1.97 ± 0.03
English Ovals KNF	30.6±0.5	2.33 ± 0.04
Domino KNF	34.0±0.7	1.56±0.04
Players RNF	35.0 ± 0.5	2.48±0.07

TAR AND NICOTINE VALUES BY NICOTINE RANK

	Tar	Nicotine
BRAND	mg/cigt.	mg/cigt.
Carlton 70's RF	0.2±0.1	0.04±0.01
Carlton KFM (2 mg)	0.8 ± 0.1	0.10 ± 0.01
Carlton KF (2 mg)	1.3 ± 0.1	0.13 ± 0.02
Now KFM	1.7±0.2	0.15 ± 0.01
Now KF	$\textbf{1.6} \!\pm\! \textbf{0.1}$	0.15 ± 0.01
Carlton KF (mixed)	2.5±0.3	0.23 ± 0.03
Carlton KFM (mixed)	2.7±0.3	0.24 ± 0.03
Carlton KF (5 mg) .	3.7 ± 0.3	0.33 ± 0.02
Carlton KFM (5 mg)	3.7±0.3	0.34 ± 0.02
King Sano KFM	7.4±0.4	0.37±0.02
King Sano KF	7.0±0.3	0.39 ± 0.01
Merit KF	8.3±0.2	0.58 ± 0.01
Merit KFM	8.3±0.2	0.58 ± 0.01
Tempo KF	8.1±0.4	0.60 ± 0.03
Benson & Hedges RF	9.5±0.3	0.61 ± 0.02
Pall Mall Extra Mild KFHP	7.6 ± 0.2	0.65 ± 0.01
Kent Golden Lights KF	8.3±0.3	0.67 ± 0.03
Iceberg 100's FM	8.8±0.2	0.68 ± 0.03
Lucky Ten KF	9.3 ± 0.2	0.68 ± 0.02
Lucky 100's F	9.0±0.3	0.68 ± 0.01
True KFM	11.1 ± 0.2	0.68 ± 0.02
True KF	11.1±0.3	0.68±0.02
Sano RNF	18.4±0.4	0.69 ± 0.02
Multifilter KFM	10.7 ± 0.2	0.71 ± 0.02
Vello KFM	9.9±0.2	0.71 ± 0.01
Vello KF	10.5±0.3	0.74 ± 0.02
Pall Mall Extra Mild KFSP	9.8±0.3	0.74 ± 0.02
Vantage KF	10.8±0.3	0.74±0.01
Vantage KFM	10.7 ± 0.2	0.78 ± 0.01
Marlboro KFMHP	14.1±0.2	0.80 ± 0.02
True 100's FM	13.2±0.3	0.81 ± 0.02
Salem Lights KFM	11.6±0.3	0.82±0.04
Parliament KFHP	14.0±0.2	0.82±0.02
True 100's F	13.7±0.3	0.84 ± 0.04
Multifilter KF	12.9±0.4	0.86±0.02
Marlboro Lights KF	13.5 ± 0.3	0.86±0.02
Parliament KFSP	14.7±0.2	0.86 ± 0.02
Doral KFM	11.9±0.4	0.87 ± 0.02
Marlboro KFMSP	14.6±0.2	0.88±0.02
Alpine KFM	14.6±0.2	0.89±0.02
Doral KF	12.7±0.3	0.90±0.02
Kool Milds KFM	13.6±0.2	0.93±0.02
Kent KFHP	15.0 ± 0.3	0.94±0.02
Winston Lights KF	13.0 ± 0.3	0.94±0.02
Fact KFM	12.7±0.2	0.95±0.02
Virginia Slims 100 FM	15.7±0.2	0.96±0.02
Miyako KF	14.5±0.3	0.98 ± 0.03
Virginia Slims 100 F	15.9 ± 0.2	0.98 ± 0.02
Parliament 100 F	15.9±0.4	0.98 ± 0.03
Galaxy KF	15.2±0.2	0.98 ± 0.02

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	Tar	Nicotine
BRAND	mg/cigt.	mg/cigt.
Philip Morris Int. 100 FM	16.6±0.2	1.01 ± 0.02
Kent KFSP	15.9±0.2	1.02 ± 0.02
Raleigh Extra Mild KF	13.7±0.3	1.02±0.03
Viceroy Extra Mild KF	13.5±0.3	1.03 ± 0.02
L & M KFHP	16.5±0.3	1.03±0.02
Virginia Slims 120 FM	14.8±0.7	1.03±0.01
Fact KF	14.3±0.3	1.04±0.02
Belair KFM	14.6±0.2	1.04±0.03
Spring 100's FM	18.1±0.4	1.04 ± 0.03
Marlboro KFHP	17.1±0.3	1.06±0.02
Saratoga 120 F	16.2±0.3	1.06±0.02
Benson & Hedges 100's FMHP	16.8±0.3	1.06 ± 0.01
Eve 120's F	14.5±0.4	1.07±0.02
Eve 120's FM	14.9±0.3	1.07±0.02
Benson & Hedges 100's FSP	17.4±0.4	1.08 ± 0.02
Benson & Hedges 100's FHP	17.3±0.3	1.09±0.02
Du Maurier KF	15.6±0.3	1.09 ± 0.03
Benson & Hedges KF	15.6±0.3	1.09±0.02
Saratoga 120 FM	16.9±0.3	1.09±0.02
Kent 100 FM	16.5±0.3	1.09±0.02
Viceroy KF	15.6±0.2	1.09±0.02
Vanguard KF	15.7±0.4	1.09 ± 0.03
Eve 100 F	16.5±0.3	1.09 ± 0.02
Benson & Hedges 100's FMSP	17.5±0.3	1.10 ± 0.02
Virginia Slims 120 F	17.1±0.5	1.11 ± 0.03
Raleigh KF	15.9±0.3	1.11 ± 0.03
Marlboro 100 FSP Marlboro KFSP	17.5±0.3 18.2±0.4	1.12±0.02 1.12±0.02
Old Gold Filters KFSP	17.1±0.4	1.12±0.02 1.12±0.03
Marlboro 100 FHP	17.8±0.3	1.12 ± 0.03 1.12 ± 0.02
Eve 100 FM	17.3±0.3	1.12 ± 0.02 1.13 ± 0.03
Stratford KNF	29.2±0.4	1.13 ± 0.03
St. Moritz 100 FM	17.5±0.2	1.13 ± 0.02
Philip Morris Int. 100 F	17.9±0.3	1.13 ± 0.02
St. Moritz 100 F	17.3±0.4	1.14±0.03
Mapleton KF	21.5±0.5	1.14±0.03
Eagle 20's KF	18.3±0.3	1.15 ± 0.02
Chesterfield 101 F	17.8±0.5	1.15 ± 0.03
Silva Thins 100 FM	15.3±0.4	1.15±0.03
Oasis KFM	18.5±0.4	1.15 ± 0.02
Lark KF	17.5±0.3	1.16±0.03
L & M 100 FM	18.1 <u>±</u> 0.4	1.16 ± 0.03
L & M 100 F	17.7±0.4	1.16 ± 0.03
Philip Morris RNF	20.8±0.4	1.16 ± 0.04
Kent 100 F	18.0±0.3	1.16 ± 0.02
L & M KFSP	18.5±0.3	1.17±0.02
Chesterfield KF	18.4±0.3	1.18 ± 0.02
Eagle 20's KFM	18.6±0.4	1.19±0.03
Old Gold Straights RNF	19.7±0.4	1.19±0.03
Domino KF	21.8±0.5	1.19 ± 0.04

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	Tar	Nicotine
BRAND	mg/cigt.	mg/cigt.
**************************************		<u>v.</u>
Salem KFMSP	18.2±0.4	1.20 ± 0.02
Zack KFM	16.8 ± 0.2	1.21 ± 0.02
Pall Mall 100 FM	15.5±0.3	1.21 ± 0.02
Super M 100 FM	16.7±0.3	1.21 ± 0.02
Max 120 FM	16.4 ± 0.3	1.23±0.02
Zack KFHP	17.8±0.3	1.23 ± 0.02
Newport KFMHP	17.6±0.3	1.24±0.03
Camel KFHP	18.6 ± 0.3	1.25±0.03
Old Gold Filter KFHP	16.6±0.2	1.25±0.02
Zack KFSP	17.6±0.2	1.26 ± 0.02
Max 120 F	16.3±0.5	1.26±0.04
Salem KFMHP	18.9 ± 0.3	1.26±0.04
Silva Thins 100 F	16.1 ± 0.2	1.26 ± 0.02
Winston 100 FM	18.2±0.2	1.26±0.02
Pall Mall KFSP	18.3±0.3	1.27 ± 0.02
Camel KFSP	18.5±0.3	1.28 ± 0.02
Lark 100 F	19.4±0.3	1.28±0.02
Salem 100 FM	18.2±0.3 19.5±0.4	1.28±0.02
Winston KFHP		1.29±0.03 1.29±0.03
Long John 120 FM	15.8±0.3 17.7±0.4	1.29±0.03
Viceroy 100 F Newport KFMSP	17.7±0.4 18.1±0.5	1.29 ± 0.03 1.29 ± 0.03
Winston KFSP	19.0±0.3	1.30 ± 0.03
Raleigh 100 F	19.0±0.3 18.0±0.4	1.30±0.02
Winston 100 F	18.8±0.3	1.31±0.03
Phoenix 120 FM	19.4±0.5	1.32±0.04
Montclair KFM	18.1±0.5	1.32±0.04
American Longs 120 FM	16.9±0.7	1.33±0.04
Twist 100 FM	17.0±0.3	1.34±0.02
Mapleton RNF	28.0±0.4	1.34±0.03
Phoenix 120 F	19.5±0.5	1.34±0.05
Kool RNFM	21.4±0.8	1.34±0.04
Belair 100 FM	17.6 ± 0.4	1.35 ± 0.03
Stratford KF	25.2±0.4	1.36 ± 0.03
Kool 100 FM	18.0±0.4	1.37 ± 0.03
Old Gold 100's F	20.5±0.4	1.37 ± 0.03
Kool KFMSP	16.8±0.3	1.38 ± 0.02
Kool KFMHP	17.1±0.3	1.40 ± 0.03
Tareyton 100 F	19.3±0.4	1.41 ± 0.03
Tareyton KF	20.1±0.3	1.42 ± 0.02
Newport 100 FM	19.5±0.4	1.44±0.03
Pall Mall 100 F	18.9±0.3	1.44±0.02
Chesterfield RNF	24.7±0.6	1.45±0.04
Long Johns 120 F	18.6±0.4	1.46±0.02
Piedmont RNF	25.7±0.4	1.46±0.04
Philip Morris Commander KNF	25.3±0.4	1.46±0.03
L. T. Brown 120 FM	19.5±0.3	1.47±0.03
Old Gold Straights KNF	24.4±0.3	1.48±0.03
L. T. Brown 120 F	19.1±0.5	1.49±0.02
Tall 120 FM	18.2±0.5	1.52±0.05

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BRAND	Tar mg/cigt	Nicotine mg/cigt.
American Longs 120 F	19.5±0.5	1.52±0.04
Dawn 120 F	20.7±0.4	1.54±0.03
Domino KNF	34.0±0.7	1.56±0.04
Lucky Strike RNF	25.4±0.4	1.56±0.03
Camel RNF	23.9±0.5	1.56±0.03
Raleigh KNF	25.5±0.6	1.57±0.04
Picayune RNF	20.7±0.4	1.59±0.03
Pall Mall KFHP	23.6±0.4	1.61±0.02
More 120 F	21.8±0.5	1.61±0.04
Home Run RNF	20.9±0.5	1.63±0.03
Dawn 120 FM	21.7±0.4	1.64±0.03
Tall 120 F	20.9±0.4	1.64±0.03
Lucky Strike Filter KF	25.2±0.4	1.65±0.02
Fatima KNF	28.2±0.5	1.67±0.03
More 120 FM	22.5±0.4	1.73±0.04
Chesterfield KNF	28.8±0.5	1.73±0.03
Pall Mall KNF	27.1 ± 0.5	1.73±0.03
English Ovals RNF	23.6±0.5	1.81 ± 0.05
Herbert Tareyton KNF	28.4±0.5	1.85±0.04
Half & Half KF	24.9±0.3	1.87±0.03
Bull Durham KF	29.8±0.4	1.97±0.03
English Ovals KNF	30.6 ± 0.5	2.33±0.04
Players RNF	35.0±0.5	2.48±0.07